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EXAMINER

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ART UNIT	PAPER NUMBER
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2166

DATE MAILED: 05/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/670,561

Applicant(s)

CHKODROV ET AL.

Examiner

Srirama Channavajjala

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>9/26/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-44 are presented for examination.

Drawings

2. The Drawings filed on 9/26/2003 are acceptable for examination purpose.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims, for example claim 1 is directed to "A method for maintaining aggregations of values contained by fields of multiple database records, comprising: creating multiple aggregation groups, each group including a plurality of aggregation records, each aggregation record including a value for an aggregation of values..... selecting a first aggregation group upon insertion or update.....revising, based on one or more values within the inserted or updated first database.....preventing subsequent selection of the first aggregation group until.....selecting, while the first aggregation group update transactionrevising, based on one or more values within the inserted or updated second database....second aggregation group". Therefore, each specific function must be shown or the feature(s) canceled from the claim(s), or at least a flow-diagram showing every feature of the invention specified in the claims, although drawing fig 13 is a flow chart, but do not specify every feature particularly, first aggregation group, first database, multiple database records, second aggregation group, second database records and like. No new matter should be entered.

The drawings fig 1 through 12 are objected to because they fail to show necessary symbols to the textual labels of features in figs 1 through 12, for example textual labels in fig 1, customer, business X, server, database, Redmond warehouse, Seattle warehouse, client etc. do not have "symbols" or element numbers, that would have given the viewer necessary detail to fully understand this element[s] at a glance. Applicant also failed to clearly show for example fig 1 necessary symbols with respect to textual labels both in the drawings as well as in the specification. A descriptive textual label symbols for each figures would be needed to fully and better understand these figures without substantial analysis of the detailed specification. In general, figures 1 through 12 required proper symbols to the descriptive textual labels. Any structural detail that is of sufficient importance to be described should be shown in the drawing[s]. Optionally, applicant may wish to include element numbers next to the present figures to fulfill this requirement. See 37 CFR 1.83.

37 CFR 1.84(n)(o) is recited below:

(n) Symbols . Graphical drawing symbols may be used for conventional elements when appropriate. The elements for which such symbols and labeled representations are used must be adequately identified in the specification. Known devices should be illustrated by symbols which have a universally recognized conventional meaning and are generally accepted in the art. Other symbols which are not universally recognized may be used, subject to approval by the Office, if they are not likely to be confused with existing conventional symbols, and if they are readily identifiable.

(o) Legends . Suitable descriptive legends may be used subject to approval by the Office, or may be required by the examiner where necessary for understanding of the drawing. They should contain as few words as possible.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Information Disclosure Statement

3. The information disclosure statement filed on 9/26/2003 is in compliance with the provisions of 37 CFR 1.97, and has been considered and a copy is enclosed with this Office Action.

4. At page 8, [25], page 14, [35], applicant cited "Karent Delaney (2001 Microsoft press) and Microsoft SQL SERVER 2000, applicant is hereby required to submit the same in PTO-1449 in response to this office action for further consideration.

Specification

5. The disclosure is objected to because of the following informalities: At page 7, p24, page 8, p26, applicant incorporated co-pending US Patent application **10/157,968**, applicant is hereby required to update the status of the application in response to this office action., further, applicant is required to specify "cross-reference" at the beginning of the specification [at page 1].

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6. Applicant has incorporated by reference co-pending application 10/157,968 at page 7, p24, page 8, p26 in the specification. Examiner notes that incorporation by reference of an application in a printed United States patent constitutes a special circumstance under 35 U.S.C. § 122 warranting that access of the original disclosure of the application be granted. The incorporation by reference will be interpreted as a waiver of confidentiality of only the original disclosure as filed, and not the entire application file, *In re Gallo*, 231 USPQ 496 (Comm'r Pat. 1986). If Applicant objects to access to the entire application file, two copies of the information incorporated by reference must be submitted along with the objection. Failure to provide the material within the period provided will result in the entire application (including prosecution) being made available to petitioner. The Office will not attempt to separate the noted materials from the remainder of the application. Compare *In re Marsh Engineering Co.*, 1913 C.D. 183 (Comm'r Pat. 1913).

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. ***Claims 1-44 are rejected under 35 U.S.C. 101 because invention is directed to non-statutory subject matter.***

As set forth in MPEP 2106(II)A:

Identify and understand Any Practical Application Asserted for the Invention

The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at 1373, 47USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); In re Ziegler, 992, F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)). Accordingly, a complete disclosure should contain some indication of the practical application for the claimed invention, i.e., why the applicant believes the claimed invention is useful.

Apart from the utility requirement of 35 U.S.C. 101, usefulness under the patent eligibility standard requires significant functionality to be present to satisfy the useful result aspect of the practical application requirement. See Arrhythmia, 958 F.2d at 1057, 22 USPQ2d at 1036. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does

not make the invention eligible for patenting. For example, a claim directed to a word processing file stored on a disk may satisfy the utility requirement of 35 U.S.C. 101 since the information stored may have some "real world" value. However, the mere fact that the claim may satisfy the utility requirement of 35 U.S.C. 101 does not mean that a useful result is achieved under the practical application requirement. The claimed invention as a whole must produce a "useful, concrete and tangible" result to have a practical application.

8. Regarding claim 1, "A method for maintaining aggregations of values contained by fields of multiple database records, comprising:

creating multiple aggregation groups, each group including a plurality of aggregation records, each aggregation record including a value for an aggregation of values.....

selecting a first aggregation group upon insertion or update.....

revising, based on one or more values within the inserted or updated first database.....

preventing subsequent selection of the first aggregation group until.....

selecting, while the first aggregation group update transaction

revising, based on one or more values within the inserted or updated second database....second aggregation group" is directed to "abstract idea" because all of the elements in the claim 1 would reasonably be interpreted by one of ordinary skill in light of the disclosure as software, such that the method is software, *per se*, is "non-statutory subject matter" and **claim 1** do not have "practical application" because the "final result" by the claimed

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invention in the claim 1 elements particularly “revising, based on one or more values within the inserted or updated second database record and during the first aggregation group update transaction, the aggregation value of one of the aggregation records of the second aggregation group” is not producing “useful, tangible and concrete” and therefore, claim 1 is a non-statutory subject matter. The claimed invention is subject to the test of State Street, 149 F.3d at 1373-74, 47 USPQ2d at 1601-02. Specifically State Street sets forth that the claimed invention must produce a “*useful, concrete and tangible result.*” The **Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility** states in section IV C. 2 b. (2) (on page 21 in the PDF format):

The tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement does require that the claim must recite more than a § 101 judicial exception, in that the process claim must set forth a practical application of that § 101 judicial exception to produce a real-world result. Benson, 409 U.S. at 71-72, 175 USPQ at 676-77 (invention ineligible because had “no substantial practical application.”).

Claim 1 have the result of producing “real-world” results related to “first aggregation update transaction in relation with the aggregation records of the second aggregation group” however the claim[s] do not specify that the result neither stored nor output is displayed to a user or otherwise used in the real world, but does not output useful, concrete and tangible result.

The claims 2-11 dependent from claim 1 is also rejected in the above analysis.

9. Regarding claim 12, "A method for maintaining aggregated data regarding multiple instances of an organizational activity, each instance of the activity having one of a plurality of process states, comprising:

'creating a plurality of records in an aggregated data table.....same time period;
and

'updating the aggregated data table to reflect deletion of data corresponding to instances in one of the process states outside of a preselected time window" is directed to "abstract idea" because all of the elements in the claim 12 would reasonably be interpreted by one of ordinary skill in light of the disclosure as software, such that the method is software, per se, is "non-statutory subject matter" and **claim 12** do not have "practical application" because the "final result" by the claimed invention in the claim 12 elements particularly "updating the aggregated data table to reflect deletion of data.....preselected time window"" is not producing "useful, tangible and concrete" and therefore, claim 12 is a non-statutory subject matter. The claimed invention is subject to the test of State Street, 149 F.3d at 1373-74, 47 USPQ2d at 1601-02. Specifically State Street sets forth that the claimed invention must produce a **"useful, concrete and tangible result."** The **Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility** states in section IV C. 2 b. (2) (on page 21 in the PDF format):

The tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement does require that the claim must recite more than a § 101 judicial exception, in that the

process claim must set forth a practical application of that § 101 judicial exception to produce a real-world result. Benson, 409 U.S. at 71-72, 175 USPQ at 676-77 (invention ineligible because had “no substantial practical application.”).

Claim 12 have the result of producing results related to “updating the aggregated data table to reflect deletion of data” with a “satisfying proper condition[s]” however the claim[s] do not specify [a]: satisfying proper condition[s]; [b] that the result neither stored nor output is displayed to a user or otherwise used in the real world, but does not output useful, concrete and tangible result.

The claims 13-17 dependent from claim 12 is also rejected in the above analysis.

10. Regarding claim 18, “A computer-readable medium having stored thereon data representing sequences of instructions which, when executed by a processor, cause the processor to perform steps comprising:

creating multiple aggregation groups, each group including a plurality of aggregation records, each aggregation record including a value for an aggregation of values.....

selecting a first aggregation group upon insertion or update.....

revising, based on one or more values within the inserted or updated first database.....

preventing subsequent selection of the first aggregation group until.....

selecting, while the first aggregation group update transaction

revising, based on one or more values within the inserted or updated second database....second aggregation group”

which is a “software per se” performing “algorithm, formula, or routines or calculation related to “multiple aggregation group record values.....updated second database record....second aggregation group”, and as such the claimed invention is subject to the test of State Street, 149 F.3d at 1373-74, 47 USPQ2d at 1601-02. Specifically State Street sets forth that the claimed invention must produce a ***“useful, concrete and tangible result.”*** The Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility states in section IV C. 2 b. (2) (on page 21 in the PDF format):

The tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement does require that the claim must recite more than a § 101 judicial exception, in that the process claim must set forth a practical application of that § 101 judicial exception to produce a real-world result. Benson, 409 U.S. at 71-72, 175 USPQ at 676-77 (invention ineligible because had “no substantial practical application.”).

Claim 18 have the “real-world” result of producing “first aggregation update transaction in relation with the aggregation records of the second aggregation group”, however the claim 18 do not specify that the hardware and software combination or physical medium to store the “real-world result, although claim 18 recites the preamble “a computer readable medium having stored..... furthermore, it is noted that

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specification does not teach "computer readable medium" of any kind including drawing fig 1 through 13. It is noted that fig. 1 merely, showing Business X having server, database connected to two different warehouses having client and multiple customers. Therefore, claim 18 results neither stored nor output is displayed to a user or otherwise used in the real world, but does not output useful, concrete and tangible result.

"Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make the invention eligible for patenting. For example, a claim directed to a word processing file stored on a disk may satisfy the utility requirement of 35 U.S.C. 101 since the information stored may have some "real world" value. However, the mere fact that the claim may satisfy the utility requirement of 35 U.S.C. 101 does not mean that a useful result is achieved under the practical application requirement. The claimed invention as a whole must produce a "useful, concrete and tangible" result to have a practical application", see MPEP 2106(II)A.

Also, examiner notes that merely "creating multiple aggregation groups, selecting first aggregation group for updating,revising, based on one or more values related to second database record" is not a positive recitation of a real world result. Thus the claimed result is not tangible and thus the claimed result is not a "useful, concrete and tangible result." The court in State Street noted that the claimed invention in Alappat constituted a practical application of an abstract idea because it produced a *useful, concrete and tangible result* the display of a smoothed heart beat to a system user. The Federal Circuit further ruled that it is of little relevance whether a claim is directed to

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a machine or process for the purpose of a § 101 analysis. AT&T, 172 F.3d at 1358, 50 USPQ2d at 1451 (see the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility, Annex II).

The examiner reviewed the specification but was unable to find: [a] computer-readable storage medium; [b] practical “real-world” use of the result (claim 1, claim 12,18,28,34,39). If the applicant is able to find one and inserts it into the claims provide the location the element[s] is found in the specification.

In the above analysis, claims 19-27 dependent from independent claim 18 is also rejected.

11. Regarding claim 34, 39, examiner reviewed the specification but was unable to find [a] “at least one data storage device”, [b] “at least one user input device”; [c] “a processor operatively connected to said storage device and said user input device”

Furthermore, independent claims 28, 34,39 are also rejected in the above analysis.

For “General Analysis for Determining Patent-Eligible Subject Matter”, see 101 Interim Guidelines as indicated below:

<<<http://www.uspto.gov/web/offices/pac/dapp/ogsheet.html>>>

No new matter should be entered

Double Patenting

12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

13. Claims 1,12,18,28,34,39 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1,23,45,47 of co pending Application No. **10/670,276**, filed on 9/26/2003, although the conflicting claims are not identical, they are not patentably distinct from each other because in the co-pending application Independent Claims 1,23,45,47,directed to

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method for maintaining information regarding multiple instances of an activity.....creating a record in a first database table....assigning, for records of the multiple instances....deleting from the first table....creating, for records deleted from the first table..... while instant application **10/670,561 is now US Pub.No. 2005/0071320** is directed to “a method for maintaining aggregations offields of multiple database records comprising: creating multiple aggregations... subsets of multiple database records; selecting a first aggregationupdate of a first of the multiple database records...revising, based on one or more values withinpreventing subsequent selection of the first aggregation.....selecting, while the first aggregation group update.....revising, based on one or more values within the inserted or updated second database record.....aggregation group. It would have been obvious one of the ordinary skill in the art at the time of the applicant's invention to add or drop limitation in order to arrive at the same results, for example in the present application adding the limitation revising, based on one or more values within the inserted or updated first database record....”, selecting, while the first aggregation group update transaction...”related to second aggregation group or vice versa may be used for maintaining aggregation values in a multiple database records in a typical relational database tables, further examiner notes that co-pending application also directed to “maintaining multiple database records related to instances or activities”. Accordingly, the instant application claims are within the scope of the Claims of the Application No. 10/670,276.

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This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

14. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

15. Claim 7 is directed to "wherein said creating multiple aggregation groups..... **number exceeds a number of processors in a computer** used to perform the steps of claim 1. It is not clear what is meant by "**number exceeds a number of processors in a computer?**", further claim 1 does not have any "processors"; therefore, claim 7 is indefinite and vague, for compact prosecution, examiner assumes comparing aggregation groups using OLAP, and treated in the office action as "comparing aggregation groups using OLAP in the office action.

Appropriate correction is required in response to this office action.

Claim Rejections - 35 USC § 102

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

17. Claims 1-7, 10-23,26-36,39-44 are rejected under 35 U.S.C. 102(e) as being anticipated by Witkowski et al. [hereafter Witkowski], US Publication No. 2004/0006574 filed on April 25, 2003, published on Jan 8,2004.

18. As to claim 1, 18, 34, Witkowski teaches a system which including 'maintaining aggregations of values contained by fields of multiple database records' [fig 1, page 3, 0056-0058, example 1], Witkowski specifically teaches multiple database records [see fig 1], particularly multi-dimensional data in relational database management that stores various records in the tables maintaining aggregations as detailed in page 3, col 1, 0058;

'creating multiple aggregation groups, each group including a plurality of aggregation records, each aggregation record including a value for an aggregation of values contained by fields of a distinct subset of the multiple database records' [page 3, col 2, 0060-0061], Witkowski teaches data cube, more specifically in the example 2, creating particular Cube view from dimension table selecting data records forming

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subset for example as detailed in example 2, select year, quarter,c,s,ci records [see 0055] computing aggregation values;, further it is noted that “cube” as a operator used for roll-up, drill-down,sub-total, aggregates such that aggregation attributes as a dimension, multiple aggregation groups corresponds to nested grouping by grouping set as detailed in example 2;

‘selecting a first aggregation group upon insertion or update of a first of the multiple database records’ [page 25, col 2, 0365-0366], Witkowski specifically teaches update rule with respect to aggregation for example in the query as detailed in page 25, col 2, 0366, this particular example is directed to selecting query that updates aggregation over a large set of records corresponds to multiple database records [page 25, col 2, 0365];

‘revising, based on one or more values within the inserted or updated first database record and as part of a first aggregation group update transaction, the aggregation value of one of the aggregation records of the first aggregation group’ [page 25, col 2, 0366-0367], Witkowski specifically teaches “update rules” per partition, as best understood by the examiner partition corresponds to database table partition, further Witkowski partitioning tables, querying updating aggregation values for example as detailed in page 25, col 2, 0366];

‘preventing subsequent selection of the first aggregation group until the first aggregation group update transactions completed’ [page 28, col 1, 0385, 0388-0389], Witkowski teaches creating “template” queries that executes selected queries, more specifically selected queries including “multi-measure aggregates”, particularly specific

aggregate is defined over a range and further update transaction as detailed in page 28, col 1, 0388-0389

'selecting, while the first aggregation group update transaction is being performed and upon insertion or update of a second of the multiple database records, a second aggregation group' [page 28, col 1, 0389-0391], as noted, Witkowski specifically teaches multi-measure aggregates that including first, second aggregates, further Witkowski also teaches update transaction records as detailed in page 28, col 1, 0389-0391;

'revising, based on one or more values within the inserted or updated second database record and during the first aggregation group update transaction, the aggregation value of one of the aggregation records of the second aggregation group' [page 28, col 2, 0393—394].

19. As to claim 2,19, Witkowski disclosed 'each aggregation group is a separate partition of a multi-partition aggregation table' [page 26, col 2, 0373-0376], Witkowski specifically teaches specific query based on partition by product , city and deriving aggregation group as detailed in page 26, col 2, 0373-0376].

20. As to claim 3, 20, 35, Witkowski disclosed 'selecting a third aggregation group upon initiation of a subsequent transaction to update the first of the multiple database records' [page 26, col 2, 0376]; 'revising, based on one or more values within the

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subsequently updated first database record, the aggregation value of an aggregation record of the third aggregation group' [page 27, col 1, 0377].

21. As to claim 4, 21, 36, Witkowski disclosed 'combining the multiple aggregation groups into a single table of aggregation records, each record of the single table aggregation values of an aggregation record from each of the multiple aggregation groups' [pae 6, col 1, 0097-0099].

22. As to claim 5-6, 22-23, Witkowski disclosed 'creating multiple aggregation groups comprises creating at least three aggregation groups' [[page 7, col 1, 0111-0114].

23. As to claim 7, Witkowski disclosed ' creating multiple aggregation groups comprises creating a number of aggregation groups' [page 7, col 1, 0114], wherein said number exceeds a number of processors in a computer used to perform' [page 43, col 1, 0672]

24. As to claim 10, 26, Witkowski disclosed 'each of the multiple database records corresponds to an instance of an organizational activity' [fig 1]; 'each of the multiple database records includes a field having a value indicating the corresponding instance to be in one of several process states' [fig 1, fig 5]; 'each aggregation group includes time-sorted aggregation records, each time-sorted aggregation record containing an aggregation value for instances in one of the several process states during a time

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period associated with the time-sorted aggregation record' [page 3, col 2, 0064, example 3].

25. As to claim 11, 27, Witkowski disclosed 'several process states comprises an instance being completed and further comprising deleting aggregation records corresponding to instances completed outside of a preselected time window' [page 3, col 2, 0066].

26. As to claim 12, 28, 39, Witkowski disclosed 'creating a plurality of records in an aggregated data table [see fig 1, fig 11-12], each record containing an aggregate value for a subset of the multiple instances in the same process state during the same time period' [page 6, col 1, 0098]; 'updating the aggregated data table to reflect deletion of data corresponding to instances in one of the process states outside of the preselected time window' [page 13, col 1, 0172].

27. As to claim 13-14, 17, 29-30, 33, 40-41, 44, Witkowski disclosed 'deleting records from the aggregated data table indicating none of the multiple instances were in one of the process states during a time period corresponding to the deleted record' [page 37, col 2, 0536-0537].

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28. As to claim 15,31, 42, Witkowski disclosed 'assigning a null value to the completion time field for records corresponding to instances that are not completed' [page 12, col 2, 0167]; 'assigning a non-null value to the completion time field for records corresponding to instances in the completed process state' [page 12, 0170].

29. As to claim 16, 32, 43, Witkowski disclosed 'determining if a record of the instances data table has been updated' [page 13, col 2, 0177];

'revising, upon determining that the instances data table record has been updated and based on said update, an aggregated value of one of the plurality of records' [page 13, col 2, 0178];

'further determining whether the updated instances data table record contains a value indicating the associated instance is in the completed process state' [page 14, col 1, 0179];

'generating, upon determining that the associated instance is in the completed process state, a time of completion value for the instance' [page 15, col 1, 0186];

'updating a record of the aggregated data table based on the time of completion value for the instance' [page 15, col 2, 0191-0193].

Claim Rejections - 35 USC § 103

30. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

31. *Claim 8-9, 24-25,37-38, are rejected under 35 U.S.C. 103(a) as being unpatentable over Witkowski et al. [hereafter Witkowski], US Publication No. 2004/0006574 filed on April 25, 2003, published on Jan 8,2004 as applied to claims 1, above further in view of DeKimpe et al. [DeKimpe], US PatentP.No. 6665682, filed on July 19,1999 .*

32. As to claim 8, 24,37, Witkowski disclosed ' selecting a first aggregation group is initiated access one of the multiple aggregation groups' [page 25, col 2, 0365-0366]; 'preventing subsequent selection comprises refusing, access to the first aggregation group '[page 28, col 1, 0385, 0388-0389]. It is however, noted that Witkowski does not specifically disclosed 'program threads'. On the other hand, DeKimpe disclosed 'program threads' [see Abstract, col 14, line 47-54, fig 5].

It would have been obvious to one of the ordinary skill in the art at the time of Applicant's invention to incorporate the teachings of DeKimpe et al. into navigating a cube that is implemented as a relational object of Witkowski et al. because both Witkowski, DeKimpe are directed to relational databases, more specifically both are directed to "multidimensional database" using OLAP [see Witkowski: page 3, col 1,

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0049; DeKimpe: col 3, line 9-25, fig 1], and both teach "cube aggregations" [Witkowski :page 3, col 1, 0056-0057; DeKimpe: col 6, 38-41, line 48-52] and both are from same field of endeavor.

One of the ordinary skill in the art at the time of Applicant's invention to incorporate the teachings of DeKimpe et al. into navigating a cube that is implemented as a relational object of Witkowski et al. because that would have allowed users of Witkowski to use "multiple threads" that assigns separate database connection for each specific relational database table[s], further allows to modify schema concurrently without causing relational database deadlocks as suggested by DeKimpe [col 14, line 63-67] , thus improving overall performance of the system particularly improved performance of table insertion by using multiple tables or multiple threads [see DeKimpe: ABSTRACT].

33. As to claim 9, 325,38 Witkowski disclosed 'determining, upon receiving a request, access to an aggregation group, a system identifier for the requesting' [page 4, col 1, 0073]; 'assigning an aggregation group identifier' [page 5, col 2, 0093]. On the other hand, DeKimpe disclosed 'program thread' [see Abstract, col 14, line 47-54, fig 5].

Conclusion


The prior art made of record

- a. US Pub..No. **2004/0006574**
- b. US Patent.No. **. 6665682**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srirama Channavajjala whose telephone number is 571-272-4108. The examiner can normally be reached on Monday-Friday from 8:00 AM to 5:30 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alam, Hosain, T, can be reached on (571) 272-3978. The fax phone numbers for the organization where the application or proceeding is assigned is 571-273-8300 Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)

sc
Patent Examiner.
April 28, 2006


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PRIMARY EXAMINER